

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of November 29, 2006 is respectfully requested.

The Examiner rejected independent claim 21 and dependent claims 22-36, 38, 41-43, 49, and 52 as being unpatentable over the Breynaert reference (WO 01/79787) in view of the Baader reference (USP 5,954,258) and the Blanchet reference (USP 5,723,924); rejected dependent claims 37, 39, and 40 as being unpatentable over the Breynaert reference, the Baader reference, and the Blanchet reference, and further in view of Kagaya reference (US Publication 2003/84677); and rejected independent claims 44, 46, and dependent claims 45, 47, 48, 50, 51, 53, and 54 as being unpatentable over the Breynaert reference in view of the Baader and the Blanchet reference, and further in view of the Matsuyama reference (USP 6,756,711). However, independent claims 21, 44, and 46 have now been amended as indicated above so as to clarify the present invention. Therefore, for the reasons discussed below, it is respectfully submitted that amended independent claims 21, 44, and 46 are clearly patentable over the prior art of record.

Independent claims 21, 44, and 46 are each directed to a motor unit, and each of these claims has now been amended to further clarify a portion of the motor unit. Specifically, each of the independent claims now recites that the first circuit component containing section includes signal system circuit components and a printed wiring board, and *only the signal system circuit components are mounted on the printed wiring board*. The second circuit component containing section contains *power system circuit components electrically connected to the signal system circuit components by a metal bus bar*. The power system circuit components are mounted *directly* on the metal bus bar, and the metal bus bar is *operable to absorb noise* generated by the power system circuit components and the signal system circuit components.

Because the power system circuit components are *directly* mounted on the *metal bus bar*, while the signal system circuit components are mounted on the *printed wiring board* in the first circuit component containing section, the amount of current flowing through the wiring board can be reduced. Therefore, the size of the copper-foil pattern on the wiring board can be reduced so as to minimize the size of the wiring board. Therefore, when combined with the arrangement

of the first circuit component containing section and the second circuit component containing section in a three-dimensional manner as recited in the claims, it is possible to greatly reduce the size of the motor unit. Furthermore, because the metal bus bar is operable to absorb noise generated by the power system circuit components and the signal system circuit components as recited in the amended independent claims, it is possible to improve responsiveness so as to increase the motor control accuracy (see, for example, paragraph [0031] of the substitute specification filed May 1, 2006).

In the outstanding Office Action, the Examiner asserted that the Baader reference teaches a motor unit in which power system components are directly mounted on a connecting line (i.e., plug connection 58). As illustrated in Figure 2 and described in column 5, lines 1-7 of the Baader reference, a printed circuit card 55 is secured to a top part 36, and printed circuit card 43 is connected to a bottom part 37. To the extent that either the printed circuit card 55 or the printed circuit card 43 includes power system circuit components, the power system circuit components are clearly mounted on a circuit card or circuit board; they are clearly not *directly* mounted on a metal bus bar while *only* signal system circuit components are mounted on a printed wiring board. In other words, if either printed circuit card 55 or printed circuit card 43 is itself construed as “power system circuit components” directly mounted on a metal bus bar, then it is submitted that the other of printed circuit card 55 or printed circuit card 43 cannot be construed as “signal system circuit components” mounted on a printed wiring board.

Furthermore, as noted above, the Examiner asserted that the Baader reference teaches a connecting line 58 arranged between a first circuit component containing section and a second circuit component containing section. However, the independent claims have now been amended to clarify that the motor unit comprises a *metal bus bar* electrically connecting the signal system circuit components to the power system circuit components. In this regard, component 58 of the Baader reference constitutes a *plug connection* (see column 5, lines 7-8), and not a metal bus bar.

Finally, although the Examiner appears to be taking the position that the plug connection 58 shown in Figure 2 will “inherently absorb at least a portion of the noise produced by the power semiconductors” (see page 8 of the Office Action), the Examiner did not provide any

reasoning to support this assumption. In contrast to the Examiner's apparent position, the Baader reference does not disclose or even suggest a metal bus bar that is *operable to absorb noise* generated by power system circuit components and signal system circuit components and which are electrically connected to each other by the metal bus bar.

As explained above, the Baader reference does not disclose or even suggest the arrangement of signal system circuit components, power system circuit components, and a metal bus bar as recited in amended independent claims 21, 44, and 46. Furthermore, the Breynaert reference, the Blanchet reference, the Kagaya reference, and the Matsuyama reference also do not, either alone or in combination, disclose or suggest these features. Therefore, one of ordinary skill in the art would not be motivated to modify or combine the references in a manner that would result in the invention recited in amended independent claims 21, 44, and 46. Accordingly, it is respectfully submitted that amended independent claims 21, 44, and 46, and the claims that depend therefrom, are clearly patentable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

Toshiyuki AMAGASA

By: 

W. Douglas Hahm
Registration No. 44,142
Attorney for Applicant

WDH/akl
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
February 28, 2007